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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,747	12/07/2000	Sang Ic Jeong	P-162	9442
34610	7590	07/16/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			SONG, JASMINE	
			ART UNIT	PAPER NUMBER
			2188	3
DATE MAILED: 07/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application

09/730,747

Applicant(s)

JEONG, SANG IC

Examiner

Jasmine Song

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,11-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 2,4-10,14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **Detailed Action**

1. Claims 1-16 are presented for examination.

### **Specification**

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### **Drawings**

3. The drawings filed on 12/07/2000 have been approved by the Examiner.

### **Oath/Declaration**

4. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

### **Claim Rejections - 35 USC § 112**

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 11 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the SMIB address" in lines 5. There is insufficient antecedent basis for this limitation in the claim.

In claim 11, last two lines, "comparing the stored data of ...verify memory coherency" is not clear, according to the applicant's specification page 6, lines 6-7 and page 12, lines 11-14, the Examiner believes that this limitation should be changed to – comparing the stored data of the SMIB and the correspondence data of an active memory and verifying memory coherency--.

### **Claim Rejections - 35 USC § 102**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hellenthal et al., U.S. Patent 6327670 B1.

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Regarding claim 1, Hellenthal teaches that an apparatus for verifying memory coherency of a duplication processor having a symmetrical structure (col.3, lines 1-3) comprising:

an active processor (Fig.2, a first processing unit 11) in which a standby memory read command (SMRC) is generated (col.5, lines 10-18 and lines 40-45) and transmitted by hardware (Fig.2, it is taught as update bus 100) and then a read data of the standby memory which has been inputted corresponding to the SMRC is image-buffered (col.5, lines 35-39 and col.6, lines 28-33) to verify a memory coherency (col.2, lines 45-47 and col.6, lines 35-45); and

a standby processor (Fgi.2, a second processing unit 12) in which the SMRC transmitted from the active processor is analyzed (col.5, lines 42-45) and a read command of a standby memory is outputted, and then the data read from the standby memory is transmitted to the active processor (col.3, lines 16-19 and col.5. lines 19-23).

Regarding claim 11, Hellenthal teaches that a method for verifying memory coherency of a duplication processor comprising the steps of:

registering a standby memory read command (SMRC) (it is taught as the command stored in the buffer 21a, col.5, lines 65-67);

transmitting the registered SMRC to the standby processor (col.5, lines 10-18 and lines 40-45);

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analyzing the transmitted SMRC (col.5, lines 42-45), reading the data of the standby memory and transmitting the read data to the active processor (col.3, lines 16-19 and col.5. lines 19-23);

storing the read data as transmitted in the standby memory image buffer (SMIB) (col.4, lines 6-12 and col.6, lines 8-12); and

comparing the stored data of the SMIB and the correspondence data of an active memory and verifying memory coherency (col.2, lines 45-47 and col.6, lines 35-45).

Regarding claim 12, Hellenthal teaches that the SMIB is provided in a predetermined region of the active memory (col.4, lines 17-24).

### **Claim Rejections - 35 USC § 103**

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellenthal et al., U.S. Patent 6327670 B1, in view of Ayaki et al., U.S. Patent 6553476 B1.

Regarding claims 3 and 13, Hellenthal teaches the claimed invention as shown in claims 1 and 11, Hellenthal does not teach that the SMRC includes a start address, the

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size of a data to be read and an address of an SMIB for storing a read data. However, Ayaki teaches that a read command includes a start address, the size of a data to be read and an address for storing a read data (col.41, lines 27-33).

As taught by Ayaki, the use of a read command including a start address, the size of a data to be read and an address for storing a read data allows the I/O data to be transferred in bursts and the time management of I/O requests can be accurately facilitated, therefore, the effect of shortening the time during which an I/O bus is occupied (col.5, lines 26-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Ayaki in the system of Hellenthal and have a read command including a start address, the size of a data to be read and an address for storing a read data for the advantages stated above.

Accordingly, one of ordinary skill in the art would have recognized this and concluded that they are from the same field of endeavor. This would have motivated one of ordinary skill in the art to implement the above combination for the advantages set forth above.

### **Allowable Subject Matter**

11. Claims 2, 4-10, 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Conclusion**

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12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tada	US 6487169 B1
Dao	US 6427213 B1
Mangione	US 6363464 B1

13. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. 1.111 (c).

14. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine Song whose telephone number is 703-305-7701. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 703-306-2903. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306.




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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Jasmine Song 

Patent Examiner

July 8, 2004

  
7/12/04

Mano Padmanabhan

Supervisory Patent Examiner

Technology Center 2100